# FOR MYSORE STATE

Circular to Mysore

GOVERNMENT OF MADRAS.

Secrt. II --Old 28, New 16--
112,506--19-1-56

Agri (FP) (1956) Department.

Endorsement
D.O.
Memorandum
Lodged

No. 19416/56 II B

Dated 22.8.1956

FURTHER PAPERS.

| Department. | Number. | Series. | Date. |
|---|---|---|---|
| | | | |

VERY URGENT.

Office of the Chief Engineer for Irrigation, Chepauk, Madras - 5.

Memo No. 2462/55-M-7 dated 16th April, 1956

20 APR 1956
23 19416

Sub:- SOUTH KANARA DISTRICT - Palingeri anicut scheme - (Mundkur) - Plans and estimate-
Ref:- From the Superintending Engineer, West Coast circle No. 518-I d/ 15-4-55

The plans and estimate for Rs 22,000 for the construction of an anicut alone, are herewith returned administratively approved for taking necessary further action.

2. The expenditure is debitable to "68 Construction of Irrigation etc., works - Irrigation - Unproductive work under Special Minor Irrigation Programme".

3. The Superintending Engineer is requested to accord technical sanction to the estimate at an early date and direct the Executive Engineer to take up the work and show good progress .

4. Fortnightly progress report should be submitted as in the case of Special Minor Irrigation Programme works.

5. The Superintending Engineer is requested to apply for necessary funds in due course.

6. The Superintending Engineer is requested to send a precise estimate report for the anicut portion only, for Rs 22,000/- as in the abstract together with the proforma statement as early as possible.

U.Ananda Rao,
Chief Engineer for Irrigation

To the Superintending Engineer, West Coast circle.

Enc:-

1. Report of the estimate along with proforma, financial forecast and abstract in triplicate( one is annexed and the two more will follow)
2. One copy of the estimate in detail
3. One ayacut register
4. One gauge register
5. Plans S.E.W.C.153-156/55; 157-A-157.E/55; 159.A-159.E/55; 160/55; 161.A. - 161.C/55, 162-174/55; 175.A - 175.C/55; 176-A - 176.C/55; 177-A - 177.B/55 178.A - 178.B/55; 179.A - 179-B/55 and 180-181/55
6. 1 abstract estimate for Rs 22,000/-.

prc. 16/4.

(page 2. )

GOVERNMENT OF MADRAS
Agriculture (Food Production) Department.

Government Memo.No. 19416/56/F.P.II-B3 Dt. 26-5-1956

Sub: As on p.c.

Read: ~~Government Memo.No.~~ From the C.E(I) Endt 2462/55 M & 16 5/56

The attention of the ~~Collector~~ of C.E(I) is invited to ~~the Government Memo./~~his letter cited and he is requested to expedite ~~His~~ report. The submission of the ~~proposals~~ ~~referred to therein~~ with particulars required therein.

To
The Collector of C.E(I)

N.R.Date. 11.6.56

B/8

Endt.No. 2462/55-M-8 dated 16th April, 1956

Copy to the Secretary (Ex-Officio) Agriculture (F.P.) Department for information.

2. The estimate report, together with the proforma statement will be sent on receipt from the Superintending Engineer.

X

3. Regarding the subsidy to be claimed, a further report will be sent along with the estimate report and proforma statement.

16/4/56

For Chief Engineer for Irrigation

To
The Secretary to Government, (Ex -Officio),
Agriculture (F.P.) Department, Madras.

Copy to the Accountant General, Madras.

Copy to the Collector of South Kanara.

Copy to the Executive Engineer, South Kanara division.

prc. 16/4.

AS

FP II

X above: The C.E's further report may be awaited till 20.5.'56.

30/4/56

1/5/56

14/5/56

PUBLIC WORKS DEPARTMENT

From
Sri U. Ananda Rao, B.E.,M.I.E.(Ind.),
M.Am.Soc.C.E., I.S.E.,
Chief Engineer (Irrigation) P.W.D.,
Post Box No.416, Chepauk, Madras--5.

To
The Deputy Secretary to
Government(Ex-Officio),
Agriculture (Food Production)
Department, Madras.5.

Letter No. 2462/55 M-9 dated 7th June 1956.

Sir,

Sub:- IRRIGATION - Special Minor Irrigation Programme - South Kanara District - Palingeri anicut scheme (Mundkur) - Pland and estimates - Sanctioned - Proforma statement - Called for.

Ref: Government Memo. No.19416/56 -1 F.P.II.B. dated 26 - 5 - 56.

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The particulars called for from the Superintending Engineer, West Coast Circle ~~is~~ are awaited. He is being reminded to expedite them. On their receipt my further report will be submitted to Government.

for Chief Engineer(Irrigation)

GOVERNMENT OF MADRAS
Agriculture (Food Production) Department.

Government Memo.No. 19416 /56-2 F.P.II-2, Dt 27-6-1956.

Sub: As — pl cf

Read: Government Memo.No. 19416/56-1 FP II-2 dt 4/26 SA
From the C.E(I) Lr.No. 2462/55 M9 dt 6/26

29/27-6

The attention of the Collector of C.E(I)
is invited to the ~~Government Memo./his letter~~ references cited and he is requested
to expedite ~~his~~ final report. in the matter

To
The ~~Collector of~~ C.E(I)

N.R.Date. 11.7.56

B/8

GOVERNMENT OF MADRAS
Agriculture (Food Production) Department.

Government Memo.No. 19416 /56, F.P.II(3)Dt. 1956.

-:-

Sub:- As on p1 of .

Read:-Government Memo.No. 19416/56-1 F.P.II(3) dt 26.5.56
From the CEI, Lr no. 2462/ST M9-01.7-6.56.
Govt. Memo.no. 19416/56-2 F.P.II(3) dt 27.6.56

-:-

The attention of the C.E.I, MDS. is invited to the ~~Government Memo./his letter~~ references cited and he is requested to ~~expedite his report.~~ State when his final report may be expected in the matter. It is at the source he pointed out that 3 months have elapsed since the promise of giving report in this ~~behalf~~ matter was made 16.4.56.

To
The CEI, MDS.

mr.25/6.

DESPATCHED
24 JUL
24/7/56

PUBLIC WORKS DEPARTMENT

From
Sri U. Ananda Rao, B.E., M.I.E., (Ind) M.Am. Soc., C.E., I.S.E.,
Chief Engineer for Irrigation,
Chepauk, Madras.5.

To
Deputy Secretary to Government,
(Ex-Officio),
Agri. (FP) Dept., Chepauk,
Madras.

x-x-x-

GOVERNMENT OF MADRAS
Agriculture (Food Production) Department.

Government Memo.No. 19416 /56, F.P.II, Dt. 9-8 1956.

-:-

Sub:- as on PICF

Read:-Government Memo.No. NO19416/56 F P II B-3 dated 18.7.56
From the CE(P) madras letter no 2462/56-M-11 dated 20.7.56

The attention of the CE(P) is invited to Government Memo./~~his letter cited~~ and he is requested to expedite his report.

To

The CE(P) madras

mr.25/6.

17

PUBLIC WORKS DEPARTMENT

From
Sri U.Anandᵃ Rao, B.E., M.I.E.
(Ind),M.Am.Soc.C.E.,I.S.E.
Chief Engineer for Irrigation,
Chepauk, Madras.5.

To
The Secretary to Government (Ex-Officio)
Agriculture (Food Production) Department,
Chepauk, Madras.5.

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Letter No.2462/55 MEP Dated 8 - 8 - 56.

Sir,

14 AUG 56

Sub: South Kanara District - Palingere anicut scheme (Mundukur) - Plans and estimates -

Ref: Chief Engineer's (Irrigation) Endt.No.2462/55 M-8 16--4--56.

In continuation of my letter cited, I forward herewith a copy of the estimate report together with the proforma statement for the information of Government.

2. The net return is 3.4%. The scheme is therefore eligible for a shareable subsidy of Rs.4,840/- from the Government of India - vide details worked out below:-

| | | |
|---|---|---|
| Cost of the Scheme | | Rs. 22,000/- |
| At 4½% for 20 years<br>$\frac{9}{2} \times 20 \times \frac{22,000}{100}$ | = | 19,800 |
| At 3.4% for 20 years<br>$3.4 \times 20 \times \frac{22,000}{100}$ | = | 14,960 |
| Shareable subsidy | = | 4,840 |

for Chief Engineer (Irrigation)

Encl:
One estimate report.
One Proforma statement.

srp/9-8

REPORT to accompany the seheme estimate for the construction of an anicut across Bola River in Bola Village at Palingeri in South Kanara District.

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GENERAL:-

The South Kanara District has got very few irrigaion works sponsored by the Government. Irrigation Projects in the district were not seriously thought of and taken up for investigation or execution, mainly because the district enjoys plenty of rainfall during the south west monsoon, the average annual rainfall being about 145". This is generally sufficient to raise a good I crop independant of any irrigation facilities. The ryots of the district usually try to raise 2nd and 3rd crops on the marginal lands of the rivers and streams by putting up mud kattas, across them thereby heading up water and then baling or allowing it to flow by gravity. In adopting these methods the ryots are experiencing considerable difficulties and in order to assure and stabilies the required supply of water during mostly the II Crop season and III Crop period, a few irrigation schemes were recently taken up for investigation in this district and the Palingeri Anicut scheme is one among them.

The scheme benefits an existing II crop of 238.96 acres in the Bola village in Karkal taluk.

2. THE BOLA RIVER:-

This has its origin on the Western slope of the Western ghats and flows through a rugged terrain for a distance of 7 mile and afterwards runs in a plain and joins the Arabian sea near Mulki. This river is called mulki-holde in its lower reaches. It has got a good flow during the 2nd crop season and the flow dwindles in the 3rd crop period. There are no anicuts and dams anywhere across the river, but water is taken only from mudkattas erected here and there after the rains are over and water is diverted into open headed channels or lifted into the fields by baling.

p.t.o.

3. CATCHMENT AREA OF THE STREAM.

The catchment area of the river at the site of proposed anicut is 22.36square miles mostly of hilly region.Assuming the value of C in Rhyve's formula Q = C.M.2/3 as 1200, the maximum flood discharge works out to 9526 cusecs vide catchment plan No.S.E.W.C.No.153/55.

4. RAINFALL.

The nearest rain gauge station is at Mangalore which is about 21 miles from the site lying on the south-west direction. The average monsoon rainfall here is as follows:-

| | | |
|---|---|---|
| May to September | ... | 120.78" |
| October to January | ... | 12.34" |
| February to April | ... | 3.38" |
| | | 136.50" |

The distribution of the rainfall is uneven most of it occuring in the southwest monsoon or 1st crop period. The rainfall during the northeast monsoon or 2nd crop period is 12.34" average. The period of the second crop is generally from between 15th of October to 15th January. As there is very little rain in December and January there is scarcity towards the end of the 2nd crop and the supply has to be supplemented from the river to save the crop and ensure a successful harvest.

5. AVAILABILITY OF SUPPLY.

The Bola river has been gauged at Kopala about 3½ miles downstream of proposed site in the years 48 and 49 vide gauge register enclosed herewith. As can be seen from the gauge register there is a discharge of about 20 cusecs on an average in the river at the close of the II crop season i.e. by about the end of January 1949. This will suffice for irrigating 30 x 20 = about 600 acres of 2nd crop cultivation (taking the duty as 30 acres/cusec) against about 537 acres proposed to be benefitted under this scheme.

(contd)

## 6. EXISTING IRRIGATION FACILITIES:

The present anicut site is located at Latitude 13°-8' - 30"-N. and Longitude 74° 54' - 30" E. It is in the limits of Bola Village of Karkal Taluk at a place called PALINGERE, where the ryots are putting up a mud dam every year early in October.

In order to store water for raising the II and III crops vide index map No.S.E.W.C. 155/55. This mud-katta sometimes breaches resulting in loss of food grains. The ryots usually store up water upto reduced level 110.00 vide anicut plan No.S.E.W.C. 156/55. On account of the storage in the river no lands on the upstream side are submerged as there are field bunds between the river margins and paddy fields which vary in levels from 111.00 to 114.00. The mud-katta is put up by the beginning of October and the water is allowed over the surplus escapes. Thus some high level lands are benefitted by baling upstream of the mudkatta or the proposed vented dam.

## 7. THE PRESENT PROPOSALS

The scheme now proposed is to construct a vented masonry anicut across the Bola hole. AT the left flank there is a rocky hillock, which provides a good bank connection. The observed M.F.L. at site is 115.00, which was ascertained by local enquiry. The site No.1 is abandoned as it causes submersion of fore-shore cultivable lands to an extent of about 55 acres and also the scheme was found to be more costly. Hence the site No.2 was selected and investigated and the detailed plans and estimate are prepared.

## 8. DETAILS OF WORKS

It is proposed to keep the crest of the body wall of the anicut at 110.50, at left flank from L.S.45 to L.S. 130 (vide anicut plan No.S.E.W.C. 156/55) where the rock is at high level and in the remaining portion vents have been provided, without causing much permanent obstruction to the flow of river and consequent inundation of the fields above. The average cross sectional area of river is figured within the margins, and 3/4 of the area is provided in the designs of the anicut vents. The vents are proposed

to be closed by needle and horizontal shutter planks to facilitate regulation and maintenance of suitable levels upstream. The anicut will be founded on rock, properly benched with a levelling course of cement concrete of 1:4:8 mix. The body wall will be built of course rubble masonry in cement mortar 1:4 . To have proper binding between the rock and the masonry, iron dowel bars are provided throughout and necessary provision has been made in the estimate. The ventways are 5'-0" wide in the intermediate spans and 8' 0" in the end spans. The thickness of pier is 2' 0" in the intermediate spans and 3' 0" for scour vent piers. Necessary calculations in support of the designs for the body wall and piers are furnished.

It is proposed to impound water upto R.L.110.50 in front of the anicut. Two scour vents are provided at left and 3 vents at right flank with the sill at 101.00, which are fitted with needle shutters. To facilitate the removal and insertion of needle shutters R.C.platform slab 6" thick is provided over right and left side scour vents. The top of the slab and shutters is kept at R.L. 116.00 on left side and 110.5 on right side. Country wood horizontal shutters 2" thick are provided for intermediate vents and 2½ thickness for scour vents.

2) FLOOD BANK AND BANK CONNECTIONS:

The left abutment is founded on rocky bed. The right side abutment is also on rock and designed to accommodate the flood bank with the returns. This flood bank is taken to R.L.116.00 to a length of ± 50 feet with side slopes 1:1. The high floods will spill and passover the fields on the right flank. The flood bank top and sides will be revetted to a thickness of 1' 0". The right side margin of the river will be revetted both upstream and downstream of the anicut.

3) APRONS:

No apron is proposed as the bed of the river is covered with hard sheet rock throughout.

9) Store shed, rest shed and quarters for mazdoors:-

Necessary provision has been made in the estimate for this purpose.

CONCLUSION:

The scheme now proposed not only assures supply during II crop season for an ayacut of 238.96 acres. From the financial and revenue aspects as pointed above, the scheme is worth taking up especially in a district where there are very few irrigation works and where the ryots have to be content with only one crop for the whole year.

Regarding the financial forecast of the scheme, please see the Collector's letter No.D.Dis.11451/55 dated 23/12/55 (copy enclosed)

Sd. T.S.Padmanabha Iyer
Suptg. Engr. West Coast Circle.

( True Copy )

Srinivasan 11/8

SRP.9.8

Superintendent.

8/11/56

# A N N E X U R E.

25

1. Serial No.45

2. Name of village: Bola

3. Name of source -
   Mark 'C' Inam-I
   Samin-Z(Samin taken over Z(1) G.

4. Registered ayacut - nil

5. Average actual cultivation - 537 acres

6. Gap in acres - Nil

7. Free 22.36 sq.miles

8. Combine - nil

9. Equivalent (free catchment plus 1/5)
   Catchment area intercepted
   catchment col.7 plus 1/5 of column (7) .-- 22.36 sq.miles

10. Total monsoon rainfall 136.50"

11. Yield per square mile of catchment whether the catchment is treated as good average or bad, should be noted within brackets 426.03 cusecs.

12. Yield from catchment (cols.9x11) 9526 cusecs

13. Normal flow in cusecs 20 inches

14. No.of days of supply assured 100 days

15. Supply in M.cft. varying

16. Total yield from catchment and supply channel etc. cols.12 plus 15 varying

17. Existing in Mcft. not a tank

18. Proposed in M.cft. not a tank

19. No.of fillings proposed and annual storage in M.cft.in the case not established

20. Irrigable area (catchment duty adopted should also be noted) 238.96 acres (30 acres cusec)

21. Ultimate ayacut fixed 537 acres

22. Tonnage (how the tonnage is arrived at should be indicated) 24 tons of rice (240x 1/10)

23. Area benefitted 238.96 acres

24. Estimate amount Rs. 22,000/-

25. D.R.No. or C.R.No. 8-I/56-57

p.t.o.

22,000 (917
24 2.16.

26. Rate per ton ~~Rs 917/-~~ Rs. 917/-.

27, Note here whether any existing irrigation interests will be affected any ample credit has taken for land acquisition charges and abatement of land revenue;

1) No existing irrigation interests will be affected;

2) Ample credit have been taken for land acquisition charges and abatement of land revenue.

Sd. N.P.Kudva,
Executive Engineer

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/True copy/

Srinivasan 14/8

SUPERINTENDENT

prc.9.8

9/8/56

As

FP II

Please see the ~~office~~ C.E (I)'s endt at p 3 ante, and this letter at p 17 ante with its enclosures at pp 19-26 ante. It is seen from the proforma at H above, that the cost per ton of yield is Rs 917/-, which is within the limits of sanction of the C.E (I). The papers may be lodged.

14/8

AS 2

22856

24/8/56